

Claims

[c1] We claim as our invention:

1. A golf club head comprising:

a face component composed of a metal material; and
an aft-body connected to the face component, the aft-body composed of a non-metal material;

wherein the golf club head has an exterior surface area ranging from 30.0 square inches to 60.0 square inches and a volume ranging from 290 cubic centimeters to 600 cubic centimeters, and wherein the aft body has an exterior surface area ranging from 27% to 75% of the total exterior surface area of the golf club head.

[c2] 2. The golf club head according to claim 1 wherein the aft body has an exterior surface area ranging from 35% to 70% of the total exterior surface area of the golf club head.

[c3] 3. The golf club head according to claim 1 wherein the aft body has an exterior surface area ranging from 40% to 65% of the total exterior surface area of the golf club head.

[c4] 4. The golf club head according to claim 1 wherein the

aft body has an exterior surface area ranging from 50% to 60% of the total exterior surface area of the golf club head.

- [c5] 5. The golf club head according to claim 1 wherein the aft-body is composed of plies of pre-preg material.
- [c6] 6. The golf club head according to claim 1 wherein the face component has a striking plate portion and a return portion.
- [c7] 7. The golf club head according to claim 1 wherein the golf club head has a volume ranging from 350 cubic centimeters to 510 cubic centimeters.
- [c8] 8. The golf club head according to 1 wherein the face component has an exterior surface area ranging from 15 square inches to 25 square inches.
- [c9] 9. The golf club head according to claim 1 wherein the face component is composed of a metal material selected from the group consisting of titanium alloy, amorphous metal, stainless steel and maraging steel.
- [c10] 10. A golf club head comprising:
a face component composed of a metal material, the face component having a mass ranging from 50 grams to 110 grams;

an aft-body connected to the face component, the aft-body having a mass ranging from 10 grams to 60 grams; at least one weight member attached to the aft-body, the at least one weight member having a mass ranging from 30 grams to 120 grams; wherein the golf club head has a mass ranging from 165 grams to 225 grams, a volume ranging from 290 cubic centimeters to 600 cubic centimeters, and an exterior surface area ranging from 30.0 square inches to 60.0 square inches.

[c11] 11. The golf club head according to claim 10 wherein the aft body has an exterior surface area ranging from 27% to 75% of the total exterior surface area of the golf club head.

[c12] 12. The golf club head according to claim 1 wherein the aft body has an exterior surface area ranging from 40% to 65% of the total exterior surface area of the golf club head.

[c13] 13. The golf club head according to claim 1 wherein the aft body has an exterior surface area ranging from 50% to 60% of the total exterior surface area of the golf club head.

[c14] 14. The golf club head according to claim 10 the aft

body has an exterior surface area ranging from 35% to 70% of the total exterior surface area of the golf club head.

[c15] 15. The golf club head according to claim 11 wherein the golf club head has a volume ranging from 350 cubic centimeters to 510 cubic centimeters.

[c16] 16. The golf club head according to claim 11 wherein the moment of inertia about the Izz axis of the golf club head is greater than 3000 grams-centimeter squared.

[c17] 17. The golf club head according to claim 11 wherein the face component is composed of a metal material selected from the group consisting of titanium alloy, amorphous metal, stainless steel and maraging steel.

[c18] 18. The golf club head according to 11 wherein the face component comprises a striking plate portion and a return portion.

[c19] 19. The golf club head according to claim 11 wherein the aft-body comprises a crown portion and a sole portion.

[c20] 20. The golf club head according to claim 19 wherein the sole portion of the aft-body comprises a bottom section and a ribbon section.

[c21] 21. The golf club head according to claim 18 wherein the

return portion comprises an upper lateral section and a lower lateral section.

[c22] 22. The golf club head according to claim 18 wherein the return portion comprises a heel lateral section and a toe lateral section.

[c23] 23. The golf club head according to claim 18 wherein the return portion comprises an upper lateral section.

[c24] 24. The golf club head according to claim 18 wherein the return portion comprises a lower lateral section.

[c25] 25. A golf club head comprising:
a face component composed of a metal material, the face component having a mass ranging from 50 grams to 110 grams; and
an aft-body connected to the face component, the aft-body comprising a crown portion and a sole portion;
wherein the golf club head has an exterior surface area ranging from 30.0 square inches to 60.0 square inches, a volume ranging from 290 cubic centimeters to 600 cubic centimeters and a mass ranging from 165 grams to 225 grams, and wherein the aft body has an exterior surface area ranging from 27% to 75% of the total exterior surface area of the golf club head.

[c26] 26. The golf club head according to claim 25 wherein the

aft body has an exterior surface area ranging from 35% to 70% of the total exterior surface area of the golf club head.

[c27] 27. The golf club head according to claim 25 wherein the aft body has an exterior surface area ranging from 40% to 65% of the total exterior surface area of the golf club head.

[c28] 28. The golf club head according to claim 25 wherein the aft body has an exterior surface area ranging from 50% to 60% of the total exterior surface area of the golf club head.

[c29] 29. The golf club head according to claim 25 wherein the aft-body is composed of plies of pre-preg material.

[c30] 30. A golf club head comprising:
a face component composed of a titanium alloy material, the face component comprising a striking plate portion and a return portion; and
an aft-body connected to the face component, the aft-body composed of a non-metal material, the aft-body comprising a crown portion and a sole portion;
wherein the golf club head has an exterior surface area ranging from 30.0 square inches to 60.0 square inches, a volume ranging from 290 cubic centimeters to 600 cu-

bic centimeters, the moment of inertia about the lzz axis of the golf club head is greater than 3000 grams–centimeter squared, and the golf club head has a coefficient of restitution ranging from 0.81 to 0.94; wherein the aft body has an exterior surface area ranging from 27% to 75% of the total exterior surface area of the golf club head.

[c31] 31. The golf club head according to claim 30 wherein the aft body has an exterior surface area ranging from 40% to 65% of the total exterior surface area of the golf club head.

[c32] 32. The golf club head according to claim 30 wherein the aft body has an exterior surface area ranging from 50% to 60% of the total exterior surface area of the golf club head.

[c33] 33. The golf club head according to claim 30 wherein the aft–body is composed of plies of pre–preg material.

[c34] 34. The golf club head according to claim 30 wherein the sole portion of the aft–body comprises a bottom section and a ribbon section.

[c35] 35. The golf club head according to claim 30 wherein the return portion comprises an upper lateral section and a lower lateral section.

- [c36] 36. The golf club head according to claim 30 wherein the return portion comprises a heel lateral section and a toe lateral section.
- [c37] 37. The golf club head according to claim 30 wherein the return portion comprises an upper lateral section.
- [c38] 38. The golf club head according to claim 30 wherein the return portion comprises a lower lateral section.